

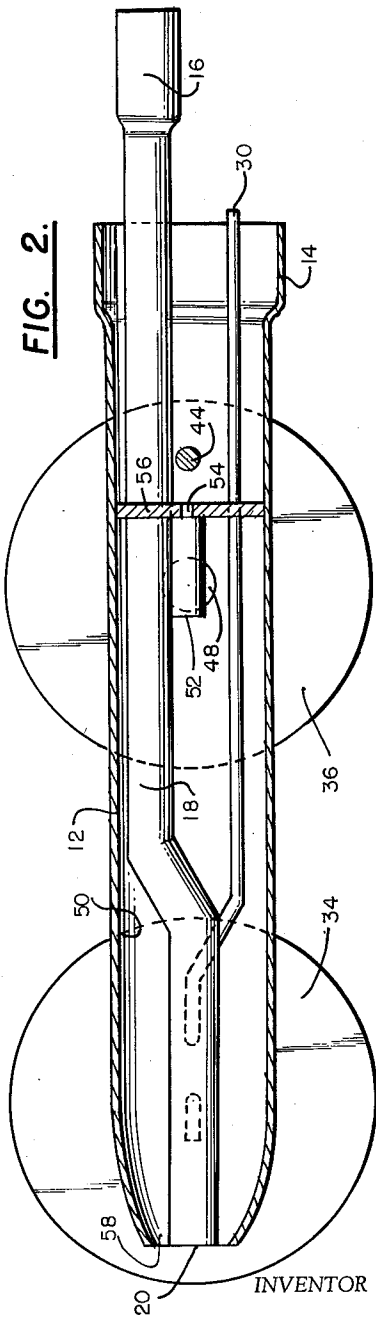
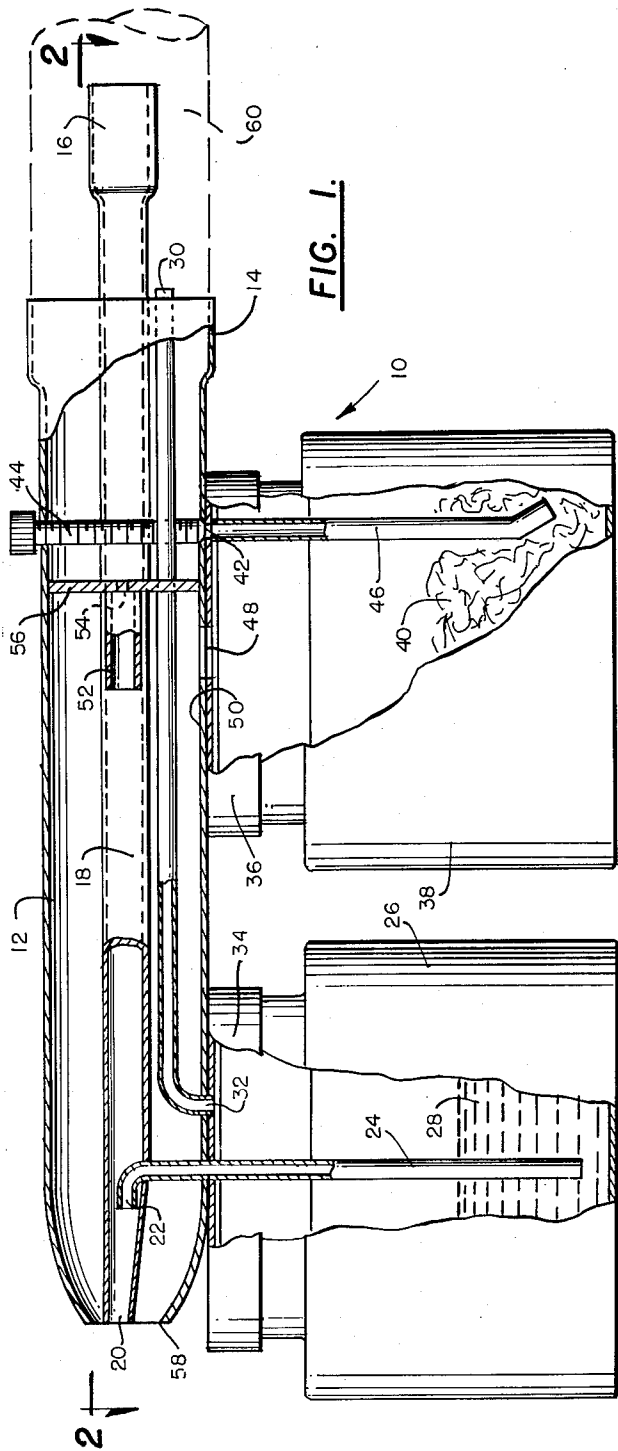
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TWIN FLOCKER

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TWIN FLOCKER

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3 Claims. (Cl. 239—304)

This invention relates to coating apparatus and more particularly to a flocking machine for simultaneously spraying a fiber and adhesive material.

It is an object of the present invention to provide a spray unit that may be conveniently operated by a conventional vacuum cleaner which will simultaneously spray a fiber mass and adhesive material so as to enable such combined spray to be directly applied for decorative, insulative, and accoustical purposes upon any desired surface.

Another object of the present invention is to provide a flocking machine of the above type having a self contained adjustable valve member for controlling the combined mixture of the adhesive and fiber mass.

Other objects of the invention are to provide a flocking machine bearing the above objects in mind which is of simple construction, has a minimum number of parts, is inexpensive to manufacture and efficient in operation.

For other objects and for a better understanding of the invention, reference may be had to the following detailed description taken in conjunction with the accompanying drawing, in which:

FIGURE 1 is a side elevational view, with parts broken away, of a twin flocker made in accordance with the present invention; and

FIGURE 2 is a longitudinal cross sectional view taken along line 2—2 of FIGURE 1.

Referring now more in detail to the drawing, a twin flocker unit 10 made in accordance with the present invention is shown to include an elongated hollow main body member 12 having a bell shaped fluid pressure inlet 14 at one end, within which another pressure fluid supply duct 16 is disposed. This fluid pressure inlet 16 supplies air pressure through a conduit 18 that has a discharge opening 20 at the front end of the main body member 12, which conduit 18 is adapted to facilitate the entrainment of liquid adhesive 28 disposed within a vessel 26. A duct 24 with a discharge outlet 22 is disposed within the interior of the conduit 18. This container or vessel 26 is removably secured to a closure cap member 34 integrally carried by the main body member 12 and through which an outlet 32 of a fluid pressure supply line 30 communicates. It will thus be recognized that as pressure is supplied to the interior of the vessel 26 through the line 30 and fluid passes outwardly through the conduit 18 under pressure, the adhesive liquid 28 will be directed outwardly through the outlet 20 in a fine stream.

Another closure cap 36 secured to the main body member 12 detachably supports a second vessel 38 adjacent to the bell shaped end 14 of the main body member 12. This vessel 38 contains a mass of fiber material 40 which is adapted to be directed outwardly through an outlet 48 in the closure cap 36 and main body member 12 in response to a supply of pressure fluid entering the vessel 38 through a duct 46 which is in communication with the interior of a bell-shaped pressure chamber 14 through a port 42. The size of the opening of this port 42 is conveniently controlled by an adjustable valve member 44 so as to control the ratio of the fibrous material being ejected compared to the quantity of the adhesive material being dispensed. When air is supplied under pressure to the interior of the vessel 38 through the line 46, and when air is delivered outwardly through a port 54 in a partition wall 56 within the main body member 12 which ultimately passes outwardly through

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the nozzle 52, the fiber mass is dispensed outwardly through the discharge opening 58 in the front of the main body member 12 after being delivered to the interior thereof through the outlet 48.

The operation of this device will now be readily understood. Adhesive liquid is placed within the front vessel 26 and the fiber mass is placed within the rear vessel 38. By connecting a conduit 60 to the bell shaped end 14 of the main body member 12 fluid pressure is simultaneously supplied to each of the ducts 16, 30; 46, 50, so as to properly pressurize the front and rear vessels 26, 38, respectively, to entrain the adhesive liquid and fibrous mass within the jet stream passing outwardly through the respective outlets 20, 58. The ratio of the fiber to the adhesive mass is controlled by adjusting the valve member 44 to control the size of the opening 42.

While various changes may be made in the detail construction, it shall be understood that such changes shall be within the spirit and scope of the present invention as defined by the appended claims.

What I claim as new and desire to protect by Letters Patent of the United States is:

1. A twin flocker unit comprising a main elongated hollow body having a bell-shaped fluid pressure inlet at one end and a nozzle discharge opening at the other end, another fluid pressure supply duct having its supply end projecting from the bell-shaped end of the main elongated hollow body and a nozzle end lying within the discharge opening of the main hollow body, a closure cap member carried by the discharge end of the main body, a container removably secured to the closure cap member and adapted to contain liquid adhesive, a duct extending from the container through the cap, main hollow body and into the other fluid pressure supply duct adjacent to its discharge end to have, when air is passed through said other pressure duct, liquid adhesive ejected therefrom, still another fluid pressure pipe extending from the bell-shaped end of the main hollow body and open thereat and extending to said closure cap for supplying pressure to the container and upon the liquid adhesive, another closure cap carried by said main hollow body in rear of the first mentioned closure cap, a container detachably secured to said other closure cap and adapted to contain the fiber mass, said fiber mass container cap and main body having an outlet to pass the fiber mass to the main body, a duct extending from the main hollow body and other closure cap to supply air under pressure to the interior of the fiber container, an adjustable valve member operable in said air supply duct for the fiber mass container and extending upwardly through the top of the main hollow body to control the ratio of the fiber mass material compared to the quantity of adhesive liquid being dispensed, a partition wall within the hollow main body forwardly of the adjustable valve member and rearwardly of the outlet opening of the fiber mass container with the main hollow body, said partition wall having a port therein, a nozzle carried by the partition wall and extending forwardly from said port beyond the outlet opening of the fiber mass material to the main hollow body to supply air under pressure for ejecting the fiber mass from its container and delivering it under pressure through the discharge opening of the main hollow body, and the bell-shaped end of said hollow body being adapted to be connected to an air pressure conduit to simultaneously supply fluid under pressure to the open ends of the ducts extended into the bell-shaped end of the hollow body, the port in the partition wall and through the adjustable valve so as to pressurize the adhesive and fiber mass containers to effect discharge of material therein outwardly through their respective outlets.

2. A twin flocker unit comprising a main elongated

hollow body having an air pressure inlet at one end and a nozzle discharge opening at the other end, another air pressure supply duct having its supply end disposed to receive air directly from the inlet end of the main body and a nozzle end lying within the discharge opening of the main body, a closure cap means carried by the discharge end of the main body, a container removably secured to the closure cap means and adapted to contain liquid adhesive, a liquid duct extending from the container through the cap means, main body and into the other air pressure supply duct adjacent to its discharge end to have, when air is passed through said other pressure duct, liquid adhesive ejected therefrom, still another air pressure duct having one end disposed to receive air under pressure and extending to said closure cap means for supplying pressure to the container and upon the liquid adhesive, another closure cap means carried by said main body in rear of the first mentioned closure cap means, a container detachably secured to said other closure cap means and adapted to contain the fiber mass, said fiber mass container cap means and main body having an outlet to pass the fiber mass to the main body, an air duct extending from the main body and other closure cap means to supply air under pressure to the interior of the fiber container, adjustable valve means operable in said air supply duct for the fiber mass container to control the discharge therefrom of the fiber mass material, a partition wall within the main body forwardly of the last mentioned air duct and rearwardly of the outlet opening of the fiber mass container with the main body, said partition wall having an air port therein operatively connecting the portions of the main body at opposite sides thereof to supply air under pressure for ejecting the fiber mass from its container and delivering it under pressure through the discharge opening of the hollow body, the inlet end of said hollow body being adapted to be connected to an air pressure conduit to simultaneously supply fluid under pressure to the air ducts and the port in the partition wall to pressurize the adhesive and fiber mass containers to effect discharge of material therein outwardly through their respective outlets.

3. A twin flocker unit comprising a main elongated hollow body having an air pressure inlet at one end and a nozzle discharge opening at the other end, another air

pressure supply duct having its supply end disposed to receive air directly from the inlet end of the main body and a nozzle end lying within the discharge opening of the main body, a closure cap member carried by the discharge end of the main body, a container removably secured to the closure cap member and adapted to contain liquid adhesive, a liquid duct extending from the container through the cap, main body and into the other air pressure supply duct adjacent to its discharge end to have, when air is passed through said other pressure duct, liquid adhesive ejected therefrom, still another air pressure duct having one end disposed to receive air under pressure and extending to said closure cap for supplying pressure to the container and upon the liquid adhesive, another closure cap carried by said main body in rear of the first mentioned closure cap, a container detachably secured to said other closure cap and adapted to contain the fiber mass, said fiber mass container cap and main body having an outlet to pass the fiber mass to the main body, an air duct extending from the main body and other closure cap to supply air under pressure to the interior of the fiber container, a partition wall within the main body forwardly of the last mentioned air duct and rearwardly of the outlet opening of the fiber mass container with the main body, said partition wall having an air port therein operatively connecting the portions of the main body at opposite sides thereof to supply air under pressure for ejecting the fiber mass from its container and delivering it under pressure through the discharge opening of the hollow body, the inlet end of said hollow body being adapted to be connected to an air pressure conduit to simultaneously supply fluid under pressure to the air ducts and the port in the partition wall to pressurize the adhesive and fiber mass containers to effect discharge of material therein outwardly through their respective outlets.

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